



# Reducing and Managing Wastes from Catch Basins

## A Guide for Pesticide Secondary Containment

**D**irt and other field debris often ends up in the catch basin of areas where chemicals are handled, mixed, loaded, and equipment is cleaned. Are these pesticide-contaminated sediments hazardous waste, and how should they be handled?

This guidance identifies typical contaminated sediments that may be regulated by the state Dangerous Waste Regulations. It describes how to determine if the sediments are regulated, the options for eliminating sump wastes, and requirements for the disposal of sediments.

### What are Some Typical Sediment Wastes?

- ✓ Operational area catch basin (sump) debris, contaminated with product spillage.
- ✓ Debris contaminated with tank mix spillage (closed mixing systems reduce direct exposure of chemicals to the handlers, and reduce the chance of spilling during filling of the spray tank).
- ✓ Debris contaminated with rinsate from cleaning equipment interior. (A direct connection from the sprayer to the washwater holding tank eliminates the need for discharging interior washwater to the catch basin.)
- ✓ Debris contaminated with washwater from cleaning equipment exterior.
- ✓ Dirt and debris from containment facility floor.
- ✓ Used filters from application equipment and catch basin pumps.

### Are Sump Materials Hazardous Wastes?

Pesticides typically adhere to soil particles in the containment facility sump or onto sump pump filters. They can accumulate up to concentrations that cause the sludges or residues to be designated as a hazardous waste. You need to know which pesticides are present, and may need to know their concentration in the sediments or filters in order to determine how to properly handle them. You especially need to know the chemical content of the sediments if you intend to apply them later as product instead of disposing of them. The sediments can be applied legally only to a treatment site specified on the pesticide label. Sediments (or liquids) should not be released from containment areas until the pesticide content is known.

### Laboratory Testing for Pesticide Waste Designation

Wastes from filters and sumps, (which cannot be used as a pesticide product) like other wastes, must be evaluated to determine if they are regulated as hazardous waste. Unless lab analysis determines otherwise, these pesticide contaminated waste materials are normally presumed to be hazardous waste. Lab testing is not always needed if you already know the waste is hazardous. Lab testing may also be avoided if you are certain, based on a thorough knowledge of the materials that entered the catch basin, that the waste is non-hazardous. Careful monitoring and housekeeping of the operational area activities can help provide good "process knowledge" to help avoid laboratory testing. Tips on good housekeeping and waste controls are presented beginning on p. 2, "*How Can Sump Wastes Be Avoided?*"

## A Cost Savings Idea to Consider

Because of the cost of laboratory testing, it is often more economical to presume the contaminated sludges or filters are regulated and dispose of them accordingly, without incurring the added costs of lab work. The cost benefit of this approach is even greater when these sludge and filter wastes can be managed in quantities less than 220 pounds per month and no other hazardous wastes are generated on site. There are fewer rules to follow and disposal is easier and often less expensive when the wastes are managed in small quantities. Other more hazardous wastes can be regulated more stringently in even smaller quantities. "Extremely hazardous" wastes, for example, could only be managed in the less stringent small-quantity generator category if less than 2.2 pounds are generated per month. Pesticide formulation wastes from pesticides with a danger or warning statement on the label are examples of "extremely hazardous wastes." If you generate less than 220 pounds of "hazardous waste" per month or less than 2.2 pounds of "extremely hazardous wastes," and you never accumulate more than 220 pounds of "hazardous waste" or 2.2 pounds of "extremely hazardous wastes" on site then you are considered a "small quantity generator" in the state Dangerous Waste Regulations.

On the other hand, if you are doubtful about the regulated status of the wastes, and the cost of disposal would be more than lab costs, the lab work may be more economical if it demonstrates that the waste is not regulated.

However, lab testing is necessary if you want to avoid disposing of contaminated sludge or filters as hazardous waste, but do not know for sure whether they are regulated. Contact your Regional Ecology hazardous waste inspector for advice about sampling requirements.

Laboratory methods that are most often used to determine whether pesticide wastes are regulated as hazardous wastes are described below. A more complete description of the methods appears in the Environmental Protection Agency publication, "Test Methods for Evaluating Solid Waste – Physical/Chemical Methods" SW 846 Third Edition, July 1986 and Update 1, August 1993. The following tests should be done if the pesticide concentration in the waste is unknown.

**Method 8150** - Calculates the amounts of leachable chlorinated herbicide in the waste, (e.g., 2,4-D, Dicamba, Marlate, Triclopyr, etc.)

**Method 8080** - Calculates the amounts of leachable chlorinated insecticide in the waste, (e.g., Endosulfan, Methoxychlor, Toxaphene, etc.)

**Method 8141** - Calculates the amounts of organophosphate pesticides in the waste, (e.g., Diazinon, Azinphos-methyl, Parathion, Chlorpyrifos, Malathion, etc.)

**Method 9095** - The waste is filtered to separate and calculate the amounts of solid and liquid in the waste. This test is used to show whether the sump sediments qualify as a sludge or a solid material. Wastes with "free liquids" are not accepted for disposal at local landfills. A county government may require this test in order to approve sludge disposal at the landfill.

The Department of Ecology has several fact sheets and handouts to describe how to properly characterize, manage, and dispose of hazardous wastes. Several handouts address pesticide wastes. If you have questions or want to request literature, call a hazardous waste specialist at your nearest Ecology Regional Office.

## How Can Sump Wastes be Avoided?

Several management techniques can help reduce regulated waste quantities.

- ☑ Consider using an injection pump system to meter pesticide into the spray boom during application. The pesticide and water are kept separate until the pesticide is metered into the discharge side of the sprayer pump, so the normal mixing operation and volume of spray solution mixture are eliminated. Injection systems help reduce the amount of rinsate generated during equipment cleaning – consequently less wastes reach the sump. Injection systems often offer improved accuracy in application, and better safety for workers because less chemical is handled during mixing/loading.

## How Should Sump Wastes and Filters be Disposed?

- ☑ Whenever possible, equipment should be cleaned in the field, at the application site. Rinsate can be applied to the target area as long as the application is consistent with the pesticide label. This way less dirt, debris, and washwater are generated at the containment facility. However, avoid repeated washing of the equipment's exterior at the same field site. Keep cleaning activities clear of wells, surface water, field tiles, and inlets.
- ☑ To reduce the quantity of liquids and contaminated sediments at the sump, transfer rinsate from the application equipment directly to a product holding tank rather than releasing it first to the wash pad and sump. A direct transfer will help avoid the rinsate from becoming contaminated from contact with other materials on the work surfaces at the wash pad or in the sump.
- ☑ Keep sumps covered when not in use to reduce dust and debris blowing in. Sumps should be thoroughly cleaned on a regular basis to avoid an over-accumulation of pesticide concentration, and to reduce sediment quantities. If possible, clean the sump each time a different pesticide is used. This way, the residues can be segregated to avoid becoming an unusable mixture. Contaminated sediments can *sometimes* be applied on the land as a legitimate pesticide use, but only when they can be legally applied to a treatment site specified on the pesticide label. Liquids may be used as makeup for future tank mixes. To get the most use of the liquids (rinsates or washwaters), sump systems should be designed to separate sediment, dirt, and oil from the liquids. If you are able to use the residues in an application, keep records of the uses. Document use of residual liquids in tank mixes, and keep a record of where the tank mix or sump sediments are applied — which fields, parts of the field used, date, pesticides used, and their rate of application. This documentation will help show that only *product* (not waste) left the facility, and that the product was legally applied.

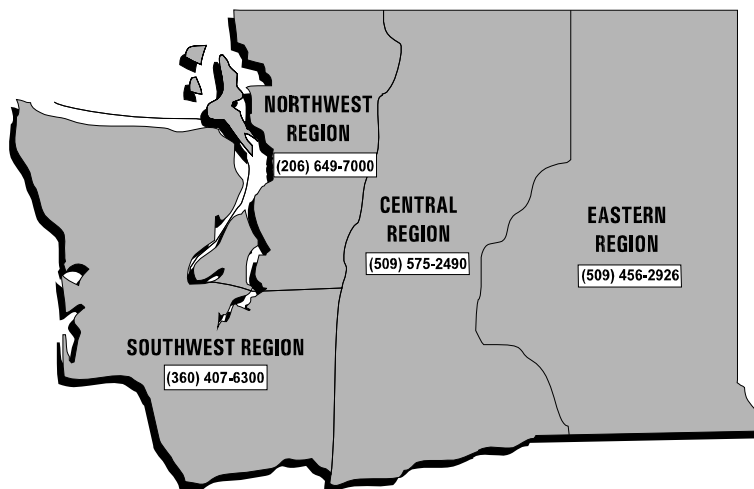
If the sediments cannot be legally applied and there is no information to demonstrate they are not regulated, they should be disposed of as hazardous waste.

Disposal is normally much simpler if the wastes are routinely managed in smaller quantities, specifically at “small quantity generator” (SQG) levels. (See page 2 for an explanation of SQG.)

“Small quantity generator” waste sediments can sometimes be disposed of through a county operated SQG program. Contact your county solid waste or health department office to find out which small quantity disposal opportunities are available. If a county does not provide a SQG disposal service, you can still arrange for disposal on your own, using one of many hazardous waste disposal contractors. Waste quantities greater than the small quantity generator levels must be disposed of at a permitted hazardous waste facility.

## Questions or More Information

For further information or assistance, or to report spills in Washington State, contact the nearest Ecology regional office.



State Emergency Management Division 24-Hour Spill Number, 1-800-258-5990

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If you have special accommodation needs, contact Dave Dubreuil at (360) 407-6721 (Voice) or (360) 407-6006 (TDD).

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